cable operators has dropped steadily, both in national percentages, as well as in most local markets.[528] For most consumers the choices are over-the-air broadcast, one cable provider, two DBS providers, and, in limited cases, an overbuilder or other delivery technology.[529] According to commenters, certain barriers to full competition exist, including: (a) cable operator exclusive access to programming, especially sports programming; (b) anti-competitive conduct including "predatory pricing"; (c) cable operator technicians cutting the connections of competitors; and (d) manipulation of local and state regulations, resulting in delay for entrants in gaining access to local public rights-of-way and in getting cable franchises.[530] In response to the allegations concerning access to programming, Comcast responds that Congress deliberately chose not to extend program access regulations to non-vertically integrated programming or terrestrially-delivered programming and that there is no evidence that any video programming network has been migrated to terrestrial delivery to evade the program access regulations[531]

125. During the past year, DBS has continued to make inroads in the MVPD market, as it has over the past ten years DBS, the major wireless MVPD technology that is available to subscribers nationwide, saw its share of MVPD subscribers increase by nearly 1.5% between June 2002 and June 2003, to 21.6% of the market.[532] DirecTV reports that DBS has higher than 15% penetration in 35 states.[533] DBS's 2003 share of the market compares to 9.4% in 1998, and less than one percent in 1993, when the service had just launched.[534]

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[528] *See* Appendix B, Table B-1. As of June 2003, approximately 75% of MVPD subscribers were served by cable operators. In June 2002, approximately 77% of MVPD subscribers were served by cable operators. Five years ago, in June 1998, roughly 85% of MVPD subscribers were served by cable operators, and at the end of 1993, almost 95% of MVPD subscribers were served by cable operators.

[529] Some sources indicate, however, that some percentage of households cannot receive one or both DBS providers due to line of sight issues *See 2002 Report,* 17 FCC Rcd at 26952 ¶ 113 n.385

[530] BSPA Comments at 14-47; RCN Comments at 6-18 and Reply Comments, *generally*; and DirecTV Comments at 9-11.

[531] Comcast Reply Comments at 14. *See also* para. 150 *infra,* and NCTA Reply Comments at 8-12. Comcast also states that the Commission has determined that the cases of terrestrially-delivered networks referenced by the commenters were not evasions of the program access rules, and were allowed under Commission rules. Comcast Reply Comments at 14 Comcast also states that some of RCN's statements concerning the availability to RCN of Comcast SportsNet are inaccurate, and that Comcast SportsNet has always been available for carriage by RCN. *Id* at 15.

[532] *See* Appendix B, Table B-1. *See also* NCTA Comments at 8.

[533] DirecTV Comments at 11.

[534] *See* Appendix B, Table B-1

Table 7: Summary of Competing Technologies, Percentage of MVPD Households Served			
	1993	1998	2003
Cable	94.89.%	85.34%	74.87%
DBS	0.12%	9.40%	21.63%
Other MVPDs	4.99%	5.26%	3.5%

126 Relatively few consumers have a second wireline alternative, such as an overbuild cable system, BSP or OVS, and this has been true for the entire history of this report. Of the 33,485 cable community units nationwide, 878, or approximately 2.6%, have been certified by the Commission as having effective competition[535] as a result of consumers having a choice of more than one wireline MVPD, or because DBS penetration was above 15%.[536] This compares to 57 cases of effective competition covering 60 community units based on overbuilds in 1998.[537]

127. In cases where incumbent cable operators faced competition from a new wireline entrant, BSPA reports benefits to consumers, such as restraint in cable price increases and increased access to advanced services.[538] Several other MVPD technologies, such as private cable systems or SMATV systems and MMDS offer consumers alternatives to incumbent cable services, but only in limited areas.

128 ***Competitive Developments in the MDU Market.*** A significant segment of many local MVPD markets is multiple dwelling units ("MDUs") Nationally, the Census Bureau reports that 24.6 million households, or 23% of the total, are in buildings with more than one unit. The Census Bureau further reports that 32% of U.S. households are renter occupied.[539] MDUs are comprised of a wide variety

[535] Under Section 76.907, a cable operator (or other interested party) may petition the Commission for a determination of effective competition pursuant to Commission's procedural rules in Section 76.7. *See* 47 C.F.R. §§ 76.7, 76 907. In its petition, a cable operator must provide evidence that it meets one of the statutory tests for the existence of effective competition. *See* 47 U.S.C. § 543 (1)(l)(A)-(D). *See also* 47 C.F.R. § 76.905(b). Based on the evidence provided in the petition and any opposition received, the Commission determines whether to grant effective competition status within a franchise area. Where effective competition exists, an LFA may not regulate basic service rates. *See* 47 C.F.R. § 76.905 (a) If a local franchising authority ("LFA") believes that a Commission finding of effective competition is no longer valid, it may file a petition for recertification pursuant to Section 76.916 of the Commission's rules. 47 C.F.R § 76.916. If the Commission grants the petition, the LFA's certification to regulate basic service tier rates will be reinstated.

[536] Of the 878 communities where effective competition status was granted, 579 were based on DBS competition.

[537] *1998 Report,* 13 FCC Rcd at 1060 ¶ 46. Numbers for 1994 are not available because the effective competition certification process had just been implemented at the time of the *1994 Report,* and data about overbuilds were sketchy *See 1994 Report,* 9 FCC Rcd at 7463-70 ¶¶ 48-60.

[538] BSPA Comments at 9-12.

[539] U.S Census Bureau, *2001 American Housing Survey,* Table 2-1, at http://www.census.gov/hhes/www/housing/ahs/ahs01/tab21.html.

of high-density residential complexes, including high and low-rise rental buildings, condominiums, and cooperatives. Historically, cable and private cable operators were the primary providers of MVPD services to MDU residents. Non-incumbent MVPD commenters raise a number of issues that they contend adversely affect their ability to serve the MDU market.

129. Exclusive contracts are those that specify that video service in an MDU will be provided only by a particular MVPD. Perpetual contracts are those which grant an MVPD the right to provide service for indefinite or very long period of time, or which have automatic renewal provisions (sometimes referred to as "evergreen"). Competitive entrants into the MVPD market have raised concerns with these kinds of contracts for the past five years. This year, BSPA states that these kinds of contracts block potential entry into MDUs, and lock tenants and building owners into outdated networks and services [540] BSPA further argues that BSPs may be deterred from entering markets where MDUs comprise a significant portion of the franchise due to the exclusionary contracts in place, and that this was a factor in the demise of Carolina Broadband.[541] BSPA notes, however, that the existing home wiring rules have allowed a BSP access to MDUs in at least one instance.[542] While DirecTV states that the Commission's over-the-air-reception devices ("OTARD") rules have encouraged some MDU landlords and owners to use a single dish for reception to prevent "dish clutter," it reiterates its previous comment that the rule should be extended to renters and owners who do not have exclusive use of areas suitable for satellite reception.[543] In addition, DirecTV reports that "cable incumbents continue to control the market for provision of video programming services to MDUs" and that DirecTV's penetration has been adversely affected.[544]

2. Competitive Issues in the Market for the Purchase of Video Programming

130. Buyers in the market for the purchase of video programming are MVPDs, including cable operators and other video programming providers, and the sellers are primarily non-broadcast programming networks.[545] This market tends to be regional or national since programmers seek to reach a much broader audience than could be provided by a local franchise area. For example, some programming services are intended for a nationwide audience (*e.g.*, CNN, USA) while others seek a regional audience (*e.g.*, New England Sports Channel)

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[540] BSPA Comments at 39

[541] *Id* at 40

[542] *Id* at 40-41 BSPA cites a case in which the U.S District Court held for Everest Communications in an inside wiring dispute with Time Warner. *See also Time Warner Entm't Co., L P. v. Atriums Partners, L.P.*, 232 F. Supp. 2d 1257 (D Kan 2002), *appeal docketed*, No. 03-3005 (10th Cir. Jan 7, 2003).

[543] DirecTV Comments at 22. *See also* SBCA Comments at 14-15 *See also 2002 Report*, 17 FCC Rcd at 26955 ¶ 123. The OTARD rules are at 47 C.F.R. § 1.4000

[544] DirecTV Comments at 21-22.

[545] In this section, we refer to programming that is packaged as one or more 24-hour video programming network(s), rather than the individual shows and series that non-broadcast networks and broadcast networks purchase and package into 24-hour networks. Purchasing content and packaging it into networks represent two steps in the process of delivering programming to consumers which, when combined with a means of distribution, result in the programming choices consumers have. Video programming also is purchased from program producers and suppliers by non-broadcast networks as well as broadcast stations and networks, but we do not address that market here.

a. The Regional Programming Market

131. For the entire history of this report, cable operators have engaged in a regional strategy called "clustering." Many of the largest MSOs have concentrated their operations by acquiring cable systems in regions where the MSO already has a significant presence, while giving up other holdings scattered across the country. This strategy is accomplished through purchases and sales of cable systems, or by system "swapping" among MSOs.

132. ***Competitive Issues Related to Clustering***. In past years, we have noted both potential benefits and potential harms from clustering.[546] Cox contends that clustering of cable systems can create greater economies of scale and scope, and thus justify the investment necessary to transform its cable systems into "advanced broadband platforms."[547] Clustering creates efficiencies through scale and scope, and allows cable operators to serve geographically contiguous areas. This, in turn, may make provision of advanced services, creation of regional programming, and competition in the regional advertising market more economical. As competitive MVPDs have done for the past five years, several commenters assert harmful effects of clustering and regional concentration on program distribution with regard to vertically-integrated incumbent cable operators, and provide examples in which programming was denied to entrants.[548] Specifically, these commenters contend that cable operators have "migrated" programming from satellite delivery to terrestrial (fiber optic) delivery, and will do so to a greater extent in the future, because only satellite-delivered programming is subject to the program access rules[549] NCTA and Comcast dispute the allegations that programming has been migrated to avoid program access requirements, and maintain that the Commission is correct in maintaining the exception for terrestrially

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[546] Potential benefits listed in the following sources include economies of scale and scope, potentially allowing a wider array of broadband services, and cost savings. *See 2000 Report*, 16 FCC Rcd at 6071 ¶ 153, citing AT&T Comments at 6-10, Comcast Comments at 21-29, and United States General Accounting Office Report to the Subcommittee on Antitrust, Business Rights, and Competition, Committee on the Judiciary, U.S. Senate; *Telecommunications The Changing Status of Competition to Cable Television*; GAO/RCED-99-158, July 1999. A potential harm is the possibility that cost savings from clustering are not passed along to consumers. *See Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992, Statistical Report on Average Rates for Basic Service, Cable Programming Services, and Equipment*, Report on Cable Industry Prices, 16 FCC Rcd 4346, 4362 ¶ 39 (2001), and *Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992, Statistical Report on Average Rates for Basic Service, Cable Programming Services, and Equipment*, Report on Cable Industry Prices, 15 FCC Rcd 10927, 10943 ¶ 39 (2000). AT&T disputes this result, citing limitations in the methods and data of the *Price Survey Reports* in question. *See 2001 Report*, 17 FCC Rcd at 1305 ¶ 141, citing AT&T Comments at 19-20, and *2000 Report*, 16 FCC Rcd at 6071-73 ¶¶ 154-55, citing AT&T Comments at 13-16 and Appendices B and D; AT&T Reply Comments at 2. Another potential harm is the possible incentive and ability to foreclose unaffiliated regional programming. *See AT&T-Comcast Merger Order*, fn. 94 *supra*, 17 FCC Rcd at 23266-69 ¶¶ 57-65. In the case of the AT&T-Comcast merger, the Commission examined the possibility of foreclosure of unaffiliated regional programming, but concluded that such foreclosure was not likely in the case of the AT&T-Comcast merger. The merger order does, however, enumerate the conditions under which foreclosure is possible. *Id* at 23266 ¶ 58.

[547] Cox Comments at 2-6.

[548] BSPA Comments at 14-19, DirecTV Comments at 9-11; RCN Comments at 6-11 and Reply Comments, *generally*

[549] *Id*

delivered content.[550] Comcast points out that DirecTV has its own exclusive arrangement for programming.[551]

133. ***System Mergers and Acquisitions, and Clusters***. In November 2002, Comcast and AT&T completed their merger.[552] No other large cable mergers occurred or were proposed over the past year. Between July 2002 and June 2003, a total of 29 small (by industry standards) transactions were announced having an aggregate value of approximately $996.2 million and involving 361,774 subscribers.[553] At the end of 2002, there were 109 clusters with approximately 51 million subscribers compared to 107 clusters and approximately 52 million subscribers at the end of 2001.[554] This compares to 106 clusters with 40.4 million subscribers at the end of 1998,[555] and 97 clusters with 20.1 million subscribers at the end of 1994, the first year we compiled clustering information.[556] In the largest cluster size category (over 500,000 subscribers), the number of clusters decreased between 2001 and 2002, from 32 to 29.[557] Over the past decade, both the number of clusters and the number of subscribers served by clusters has increased, with the number of subscribers served by clusters increasing by more than two-and-one-half times.

134. ***System Trades***. Little system trading, or swapping, occurred in the year since the last report. Between July 2002 and the end of 2002, three swaps occurred, between Mediacom and U.S. Cable Corp., between Insight and AT&T, and between CableOne and Time Warner.[558] Between the beginning of 2003 and the end of June 2003, no swaps occurred.

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[550] NCTA Reply Comments at 8-12; Comcast Reply Comments at 12-17.

[551] Comcast Reply Comments at 13

[552] Comcast Corp., *Comcast Completes AT&T Broadband Transaction* (press release), Nov. 18, 2002 When announced in December 2001, the AT&T-Comcast deal involved 13.8 million subscribers at a value of more than $71 billion.

[553] Kagan World Media, *Cable System Sales Summary*, Cable TV Investor, Aug. 28, 2003, at 13; Jan. 31, 2003, at 9; and Aug. 29, 2002, at 8. The value of the AT&T-Comcast merger is not included in these totals because these are totals of announced deals and AT&T-Comcast was announced in December 2001.

[554] *See* Appendix B, Table B-2 We note that merging clusters can cause the total number of clusters to drop. Additionally, an analysis of these numbers indicates that the criteria for including subscribers in a particular cluster may have changed, giving a false impression of a shrinking number of clusters or subscribers within those clusters.

[555] *See 2002 Report,* 17 FCC Rcd at 26977, Table B-2.

[556] *See 1997 Report,* 13 FCC Rcd at 1202, Table E-2.

[557] *See* Appendix B, Table B-2 An analysis of these numbers indicates, however, that the criteria for including subscribers in a particular cluster may have changed, giving a false impression of a shrinking number of clusters or subscribers within those clusters. This compares to 21 clusters with over 500,000 subscribers in 1998 (*2002 Report,* 17 FCC Rcd at 26977, Table B-2) and 4 in 1994 (*1997 Report,* 13 FCC Rcd at 1202, Table E-2).

[558] Kagan World Media, *Cable System Exchanges*, Broadband Cable Financial Databook 2003, Aug. 2003, at 178.

b. The National Programming Market

135 *Concentration Among Buyers of National Video Programming*. Cable operators still are the primary purchasers of multichannel video programming targeted to a national audience. As of June 2003, cable operators served approximately 74.9% of MVPD subscribers.[559] At the same time, non-incumbent MVPDs continued to increase their share of the MVPD market, which translates into increased purchasing in the programming market. For example, DirecTV's share of the MVPD market increased from 12.0% in 2002 to 12.3% in 2003. Similarly, EchoStar's share increased from 8.3% in 2002 to 9.4% in 2003.[560] Reversing a recent trend, the share of subscribers of the top four MVPDs has increased over the past year, mainly due to the AT&T-Comcast merger.[561] In 2003, the four MVPDs with the largest subscribership served 56% of all MVPD subscribers.[562] In 2002, the top four MVPDs served 50.5% of all MVPD subscribers nationwide[563] This compares to 47.2% of subscribers served by the largest four in 1993, and 54.6 in 1998, indicating that recent merger activity has reversed a downward trend in this statistic that has held since 1998. The share of subscribers served by the top ten MVPDs, however, decreased from 84.4% in 2002 to 82% in 2003. This compares to 63.2 % in 1993 and 71% in 1998.

136. We note in this context that Congress adopted Section 613(f) of the Communications Act as part of the 1992 Cable Act to address the consequences of horizontal concentration and vertical integration in the cable television industry.[564] This provision directs the Commission to establish limits on the number of cable subscribers that may be reached through commonly owned or attributed cable systems and to prescribe rules limiting the number of channels that can be occupied by the cable system's owned or affiliated video programming. The Commission's horizontal limit barred a cable operator from having an attributable interest in more than 30% of nationwide subscribership of multichannel video programming, and the vertical limit barred a cable operator from carrying attributable programming on more than 40% of its channels up to 75 channels of capacity. In *Time Warner Entertainment Co. v FCC* ("*Time Warner*"),[565] the United States Court of Appeals for the D.C. Circuit reviewed the Commission's

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[559] *See* Appendix B, Table B-1.

[560] DirecTV is the second largest MVPD with 11.6 million subscribers; EchoStar is the fourth largest MVPD with 8.8 million subscribers. *See* para 67 *supra*

[561] The top four MVPD purchasers of video programming for distribution to the households or the MDU market are Comcast (with a share of 23.7% of all MVPD subscribers), DirecTV (with a share of 12.3%), Time Warner (with a share of 11 6%), and EchoStar (with a share of 8.8%). These percentages are derived from publicly-available data and are not the result of application of the Commission's attribution rules.

[562] *See* Appendix B, Table B-4.

[563] *Id.*

[564] Section 613(f) was adopted as Section 11(c) of the Cable Television Consumer Protection and Competition Act of 1992, Pub. L No. 102-385, 106 Stat. 1460, codified at 47 U.S.C. § 533(f).

[565] 240 F.3d 1126 (D.C Cir. 2001).

cable television horizontal and vertical ownership limits,[566] and attribution benchmarks,[567] and reversed and remanded the rules. The Commission has an ongoing proceeding to respond to the ruling of the Court [568]

137. NCTA submitted comments on the use of market share and price increases as indicators of market power, including a statement and an empirical study. The statement, prepared by Dr. Debra J. Aron, concerns cable pricing, market share, and their relationship to market power. Dr. Aron argues that high rates of growth in prices do not in general create an economic inference of market power, that market share is not determinative of market power, and it is not even the primary determinant. Rather, the availability of competitive alternatives is relevant to assessing competition.[569]

138. NCTA also submitted a study of cable pricing by Dr. Steven S. Wildman. Dr. Wildman studied cable prices and chose a method for adjusting for quality changes. Dr. Wildman examined a price per viewing hour ("PPVH"), defined as price paid for cable service divided by the number of hours spent watching basic cable networks.[570] The cable price is the subscription fee paid for the lowest tier of service (BST) plus additional tiers (CPSTs) above that containing satellite-delivered national cable networks.[571] The number of viewing hours is based on Nielsen estimates of average viewing hours for cable subscribers in its national audience sample, and is not divided into smaller geographic units such as county.[572] Dr. Wildman found that PPVH has dropped three percent between 1997 and 2003 because the ratings for basic cable networks have increased faster than the nominal increase in cable prices. Adjusted for inflation, PPVH has dropped 15%.[573]

139 We appreciate the NCTA's effort to examine the question of quality adjusted cable rates, although we reserve judgment as to whether PPVH is the appropriate measure. While cable rates have increased faster than the rate of inflation, the number of channels and advanced services available to consumers also have increased over the same time. Additionally, consumers now spend a higher proportion of their viewing hours watching cable networks partially at the expense of broadcast networks, indicating a substitution toward cable networks. Several studies have attempted to adjust for changes in cable quality over time and thus examine whether cable price increases can be explained by increases in quality. The

[566] The ownership rules in question were adopted in *Implementation of Section 11(c) of the Cable Television Consumer Protection and Competition Act of 1992 Horizontal Ownership Limits,* 14 FCC Rcd 19098 (1999).

[567] The attribution rules in question were adopted in *Implementation of the Cable Television Consumer Protection and Competition Act of 1992 Implementation of Cable Act Reform Provisions of the Telecommunications Act of 1996 Review of the Cable Attribution Rules*, 14 FCC Rcd 19014 (1999). The Commission's attribution rules serve to define the level of ownership interest implicated by the horizontal and vertical limits.

[568] *See Implementation of Section 11 of the Cable Television Consumer Protection and Competition Act of 1992,* 16 FCC Rcd 17312 (2001)

[569] NCTA Comments, Aron Statement, *generally.*

[570] The Nielsen measure for basic cable networks excludes over-the-air broadcast networks

[571] E-mail from Dr Steven S. Wildman, Michigan State University, Dec. 17, 2003.

[572] *Id*

[573] NCTA Comments, Wildman Statement, *generally.*

Commission has in its past *Price Surveys* examined per channel rates to adjust for quality, which has shown considerably slower growth than the general rate of inflation[574] Per channel rates, however, value all additional channels the same even if consumers do not want new channels that are added to cable systems. On the other hand, GAO found in a recent report that the price of system upgrades for the purpose of adding non-video services was a factor in cable price increases, meaning that the increasing cost of new and improved video services is not the only factor in rising cable prices.[575] PPVH, however, may adjust for consumer demand for the new channels they are receiving since it measures the amount they are watching them. The main weakness of PPVH, as identified by Dr. Wildman,[576] is that it measures total viewing of all basic cable networks, new and old, without distinguishing between the value added by the addition of new networks and the value added through quality increases in established networks. While PPVH lacks the precision to distinguish between quality additions (new channels) and quality increases (established channels), it has the potential to measure consumer perceptions of overall quality changes in cable service. We will continue to examine this issue, and will consider PPVH, as well as other measures of quality-adjusted price, in examining the effect of competition on rates.

140. To compare and assess the concentration in the market for the purchase of programming over a period of time, we employ the Herfindahl-Hirschman Index ("HHI"), using national MVPD subscriber shares[577] We use the reported MVPD subscriber shares to calculate HHI figures. The HHI for the national market for purchase of programming is 1031 – considered "moderately concentrated" under the Merger Guidelines.[578] Due to the AT&T-Comcast merger, the larger firms in the calculation are now less equal in size, so that the HHI for 2003 is 147 points higher than the HHI of 884 reported last year. This increase marks a change in the gradual trend downward since 1998 (when the HHI was higher at 1096), and is also higher than the HHI of 880 in 1993. While this increase pushes the market into the moderately concentrated range, it is unclear whether this is a potential competitive problem, because the delivery market is local, not national, and because the main competitors to cable in both the upstream and

[574] *See, e.g, 2002 Price Survey Report*, 18 FCC Rcd at 13293, Table 2.

[575] *2003 GAO Report*, fn. 7 *supra*, at 3-5. The report notes, however, that the availability these new services benefit only those subscribers who choose them, but that all subscribers may be subsidizing new services through higher rates

[576] NCTA Comments, Wildman Statement at 18-19.

[577] *1998 Report*, 13 FCC Rcd at 24363 n.562. The HHI is a measure of concentration that is calculated by summing the squared market shares of the participants in the market. It is a measure of concentration that takes account of the distribution of the size of firms in the market. The HHI varies with the number of firms in the market and degree of inequality among firm size. Generally, the HHI increases when there are fewer and unequal sized firms in the market. HHI is usually employed to examine concentration in markets in which products are sold directly to consumers, not intermediate markets like the market for cable programming networks, but a comparison of HHIs from previous years shows a general trend in ownership concentration. The HHI calculation is based on the MVPD shares of cable companies serving over 91% of all subscribers and the two largest DBS operators. The addition of the shares of other cable operators and smaller MVPDs would add little to the total HHI. We do not include broadcast television or home video in the MVPD HHI because comparable penetration figures are not available.

[578] The United States Department of Justice and Federal Trade Commission consider markets with HHI below 1000 as "unconcentrated;" markets with an HHI between 1000 and 1800 as "moderately concentrated;" and markets with HHI above 1800 as "highly concentrated." *See 1998 Report*, 13 FCC Rcd at 24363 n.562.

downstream markets continue to grow in size. Nonetheless, this change is an important one, and we will continue to monitor it.

B. Vertical Integration and Other Programming Issues

1. Status of Vertical Integration

141 Vertical integration occurs when a video programming distributor has an ownership interest in a video programming supplier or vice versa These vertical relationships may have beneficial effects,[579] or they may deter competitive entry in the video marketplace and/or limit the diversity of programming [580] Since our last *Report*, the total number of national networks has increased, and cable operators continue to consolidate and develop new ownership interests In 2003, we identified 339 satellite-delivered national programming networks, an increase of 31 networks over the 2002 total of 308 networks Of the 339, 110 networks, representing approximately 33%, were vertically integrated with at least one cable MSO in 2003.[581] Last year, 92 networks were vertically integrated, or 30% of the 308 total

142 The following table shows the number of national satellite-delivered networks, the number of vertically-integrated networks and the percent of vertically integrated networks since 1990.[582] As the table indicates, the number of national networks increased each year, with a slight decline from 283 in 1999 to 281 in 2000. In 1998, there were 245 national satellite-delivered networks, or a 131% increase over 1994, when there were 106 networks. In 2003, the 339 national satellite-delivered networks represent a 38% increase over 1998 and a 220% increase over the last ten years. The number of vertically-integrated networks increased steadily from 1990 to 1999. Since then the number of vertically-integrated networks has fluctuated from year to year. In 1998, there were 95 vertically-integrated national networks. This represents a 70% increase over 56 vertically integrated networks in 1994 In 2003, the 110 vertically integrated networks represent a 16% increase over 1998, and a 96% increase over the last ten years. As the number of vertically-integrated networks has increased, the total

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[579] Beneficial effects can include efficiencies in the production, distribution, and marketing of video programming, and providing incentives to expand channel capacity and create new programming by lowering the risks associated with program production ventures *See, e g* , H R Rep. No. 862, 102nd Cong., 2d Sess. 56 at 41-43 (1992).

[580] *See 1995 Report*, 11 FCC Rcd at 2135 ¶158; *Implementation of Section 11(c) of the Cable Television Consumer Protection and Competition Act of 1992 Vertical Ownership Limits*, 10 FCC Rcd 7364, 7365 ¶ 4 (1995)

[581] We count each unique programming service of a multiplexed package separately. We do not, however, count services that are not unique, as in a multiplexed programming service that is merely time shifted *See 1998 Report*, 13 FCC Rcd at 24376. *See also 2000 Report*, 16 FCC Rcd at 6079 *See also* Appendix C, Table C-1.

[582] *Competition, Rate Deregulation and the Commission's Policies Relating to the Provision of Cable Television Service*, 5 FCC Rcd at 5109-5110 Appendix G, Tables IV and V (1990), *1994 Report*, 9 FCC Rcd at 7589 Appendix G, Tables 3 and 4; *1995 Report*, 11 FCC Rcd at 2132 ¶ 150; *1996 Report*, 12 FCC Rcd at 4430 ¶ 142; *1997 Report*, 13 FCC Rcd at 1122 ¶ 158, *1998 Report*, 13 FCC Rcd at 24376 ¶ 159; *1999 Report*, 15 FCC Rcd at 1057 ¶ 179, *2000 Report*, 16 FCC Rcd at 6078 ¶ 173, *2001 Report*, 17 FCC Rcd at 1309 ¶ 157, *2002 Report*, 17 FCC Rcd at 26959 ¶ 134

number of networks also has increased such that the percent of vertically-integrated networks has steadily declined (from over 50% in 1994 to 30% in 2002) until this year when the percent rose to 33%.[583]

Table 8: National Network Growth

Year	Total Number of Networks	Number of Vertically Integrated Networks	Percent of Vertically Integrated Networks
1990	70	35	50
1994	106	56	53
1995	129	66	51
1996	145	64	45
1997	172	68	40
1998	245	95	39
1999	283	104	37
2000	281	99	35
2001	294	104	35
2002	308	92	30
2003	339	110	33

143. Four of the top six cable MSOs hold ownership interests in satellite-delivered national programming networks.[584] One or more of these companies has an interest in 50 of the 110 vertically-integrated national satellite-delivered programming networks.[585] These four companies are Time Warner, which has ownership interest in 28, or eight percent of all national programming networks; Cox, which has a 15% interest in iN DEMAND and a 25% interest in Discovery, holds ownership interests in 48, or

[583] A significant decline in the percent of vertically-integrated networks occurred between 1995 and 1996 (from 51% to 45%) due to Viacom's sale of its cable systems. *See 1996 Report*, 12 FCC Rcd at 4429-30 ¶ 142.

[584] We derive our information concerning vertically-integrated networks from various sources, such as NCTA's listings in its *Cable Developments* publication, comments filed in this proceeding, various publications, and SEC filings. We recognize that our calculations may not be perfectly accurate because the ownership issue is complex. For example, our tables do not reflect that Vulcan Programming, Inc., an entity controlled by Paul Allen, owns a majority interest in Charter Communications and approximately 31% of Oxygen Network. We also note, as an example, that Liberty holds approximately 19% interest in News Corporation, which is the owner of cable networks operated by the Fox Cable Networks Group. *See* Letter from William M. Wiltshire, Counsel for News Corp., to Marlene H. Dortch, Secretary, FCC, MB Docket No. 03-124 (Oct. 6, 2003). In addition, Charter Holding Company will receive unregistered shares of Oxygen Media common stock on, or prior to, February 2, 2005. William Savoy, a director of Charter and Charter Holding Company sits on Oxygen Network's board of directors. Mr. Savoy is also an officer and director of Vulcan Programming and Vulcan Cable III.

[585] The top six MSOs are Comcast, Time Warner, Charter Communications, Cox Communications, Adelphia Communications, and Cablevision Systems. *See* NCTA, *Cable Operators,* Cable Developments 2003, at 28.

14% of all national programming networks;[586] Comcast, which has ownership interest in 41 programming networks, or 12% of all national programming networks, and Cablevision, through its programming subsidiary, Rainbow Media, has ownership interest in five national programming networks, or two percent of all national programming networks. Liberty Media is the only other cable operator that owns national programming networks[587] It has interests in 36 national networks, or 11% of all national programming networks.[588] In 1994, Time Warner had ownership interests in 16, or 15% of the 106 national programming networks; TCI had ownership interests in 23, or 22% of all national programming networks, Comcast had ownership interests in four national networks, or four percent; Cox also had ownership interests in four national networks, or four percent; and Cablevision had ownership interests in 13, or 12% of all national programming networks.[589] In 1998, Time Warner had ownership interests in 20, or eight percent of the 245 national programming networks; TCI had ownership interests in 50, or 20% of all national networks; Comcast had ownership interests in seven, or three percent of all national networks, Cox had ownership interests in 18, or seven percent of all national networks; and Cablevision had ownership interest in six, or three percent of all national networks.[590]

144 Vertical integration is not only associated with the largest cable system operators, but also the programming networks with the largest number of subscribers. Currently, nine of the top 20 non-broadcast video programming networks (ranked by subscribership) are vertically integrated with a cable MSO.[591] This figure represents a slight increase from 2002 when eight of the top 20 networks were vertically integrated.[592] In 1994, 14 of the top 20 companies were vertically integrated and, in 1998, nine of the top 20 networks were vertically integrated. Additionally, it appears that a significant amount of video programming is currently controlled by 13 companies, including cable MSOs, broadcasters, and

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586 The Cox holdings consist of 35 iN DEMAND channels and 13 Discovery channels. *See* Appendix C, Table C-1 *See also* Cox Comments at 21.

587 We include Liberty Media's programming networks in our determination of the share of national programming networks that are vertically integrated because it is covered by the provisions of the 1992 Act and the Commission's rules relating to program access, channel occupancy, and program carriage. *See* 47 U.S.C. § 548; 47 C F R §§ 76 1000-76.1003 These rules apply to any party that owns a cable system and a satellite-delivered national programming network. Liberty Media remains a cable operator through its ownership of Cablevision of Puerto Rico and, as such, it is appropriate to include its networks in calculating the share of vertically-integrated national programming networks.

588 If we did not count Liberty Media as being vertically integrated, the ratio of vertically-integrated networks would increase from 20.6% in 2002 to 24.8% in 2003. *See* Appendix C, Table C-5.

589 *1994 Report*, 9 FCC Rcd at 7256 Appendix G, Table 6

590 *1998 Report*, 13 FCC Rcd at 24445 Appendix D, Table D-5. We include TCI's ownership interests for 1994 and 1998 because on February 17, 1999, the Commission approved the transfer of control of TCI's licenses to AT&T in *Applications for Consent to the Transfer of Control of Licenses and Section 214 Authorizations from Tele-Communications, Inc., Transferor to AT&T Corp, Transferee*, 14 FCC Rcd at 3160 (1999) and on November 13, 2002, the Commission approved the transfer of control of Licenses from Comcast and AT&T to AT&T-Comcast in *AT&T-Comcast Merger Order*, fn 94 *supra*. Subsequently, AT&T-Comcast dropped the AT&T from its name

591 *See* Appendix C, Table C-6.

592 *See 2002 Report*, 17 FCC Rcd at 26998 Appendix C. Table C-6.

other media entities.[593] Almost all (*i.e.*, 18) of the top 20 programming networks in terms of subscribership are owned by one or more of these 13 companies.[594]

145. Vertical integration is also associated with the largest cable system operators in terms of prime time ratings. Seven of the top 15 prime time non-broadcast video networks are vertically integrated with a cable MSO, with the other eight owned at least in part by one of the major broadcast networks.[595] This figure represents a slight increase since 2002, when six of the top 15 networks were vertically integrated.[596] In 1994, 12 of the top 15 companies were vertically integrated and, in 1998, nine of the top 15 companies were vertically integrated.[597]

146. This year, we found 61 programming services that have been planned but are not yet operational, an increase of one over the *2002* Report's count of 60 planned services.[598] The planned services count includes some overlap from previous years because it can often take several years from the announcement of a new programming network to its launch and initiation of service. Moreover, we include in this list programming that has been announced but is in various stages of development, which can lead to variations in the count from year-to-year. During 2003, several of the planned services listed in the 2002 report, such as College Sports Television and the Tennis Channel, launched. We first reported on planned programming services in 1995. At that time, there were 80 planned services.[599] Some of the 1995 planned services launched by the following year were Animal Planet and BET on Jazz.[600] In 1998, we reported that there were 65 planned programming services, a drop from 1995.[601]

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[593] The 13 companies are: Time Warner, Cablevision, Comcast, Cox, Disney, E. W. Scripps Co., General Electric, Hearst, Liberty Media, Advance Newhouse, News Corp., Viacom, and Vivendi. *See* http://www.cjr.org/tools/owners (visited at Oct. 17, 2003). We note that Liberty Media owns approximately 19% of News Corp. and that General Electric and Vivendi have announced plans to merge. *See* Letter from William M. Wiltshire, Counsel for The News Corporation Limited, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 03-124 (Oct. 6, 2003); Vivendi Universal, *General Electric and Vivendi Universal Sign Agreement To Merge NBC and Vivendi Entertainment* (press release), Oct. 8, 2003, at http://www.vivendiuniversal.com/vu/en/press_2003/20031008_General_Electric_and_Vivendi_Sign_Agreement_To_Merge_NBC_and Vive.cfm.

[594] C-SPAN and the Weather Channel are the two programming networks among the top 20 not affiliated with one of the 13 companies. C-SPAN was created by the cable industry and currently derives 97% of its revenues from affiliate fees (*i.e.*, per subscriber fees from MVPDs). The remaining three percent is provided by various investments. Affiliates have no ownership or program control interests in C-SPAN. Landmark Communications, the licensee of two broadcast television stations, owns The Weather Channel. *See* http://cjr.org/tools/owners.

[595] *See* Appendix C, Table C-7.

[596] *2002 Report*, 17 FCC Rcd at 26999 Appendix C, Table C-7.

[597] *1994 Report*, 9 FCC Rcd at 7595 Appendix G, Table 7; *1998 Report*, 13 FCC Rcd at 24453 Appendix D, Table D-7.

[598] *See* Appendix C, Table C-4. *See also 2002 Report*, 17 FCC Rcd at 26992 ¶137.

[599] *1995 Report*, 11 FCC Rcd at 2203-2205 Appendix H, Tables 3 and 4.

[600] *1996 Report*, 13 FCC Rcd at 4509 Appendix G, Table 1.

[601] *1998 Report*, 13 FCC Rcd at 24380 ¶168.

2. Other Programming Issues

147 As in previous years, this year's *Notice* requested comment on a number of programming issues apart from vertical integration and the status of existing and planned programming services.[602] We sought comment about the effectiveness of our program access, program carriage, and channel occupancy rules that govern the relationships between cable operators and programming providers.[603] In addition, the *Notice* asked if these issues that are present in programming access also affect other, emerging services, like VOD. In this section, we also address issues raised in the comments relating to the carriage of local broadcast stations pursuant to must carry and retransmission consent. We also requested information on: programming issues, including local and regional channels, public education and governmental ("PEG") channels, compliance with the DBS public interest programming obligations; locally-originated programming, children's, news and community affairs programming, programming in languages other than English, packaging of programming; and programming costs.[604]

a. Regulatory Issues

148 ***Program Access and Carriage Rules.*** The Commission's rules concerning competitive access to cable programming seek to promote competition and diversity in the multichannel video programming market by preventing vertically-integrated programming suppliers from favoring affiliated video distributors over unaffiliated MVPDs in the sale of satellite-delivered programming.[605] The program access rules apply to cable operators and to programming vendors that are affiliated with cable operators and deliver video programming via satellite to an MVPD. The rules prohibit any cable operator that has an attributable interest in a satellite cable programming vendor from improperly influencing the decisions of the vendor with respect to the sale or delivery, including prices, terms, and conditions of sale or delivery, of satellite-delivered programming to any competing MVPD. The rules also prohibit vertically-integrated satellite programming distributors from discriminating in the prices or terms and conditions of sale of satellite-delivered programming to cable operators and other MVPDs. In addition, cable operators generally are prohibited from entering into exclusive distribution arrangements with vertically-integrated programming vendors. The Commission has concluded that the statutory access requirements apply only to satellite-delivered programming and not to terrestrially-delivered programming.[606]

149. MVPDs that compete with incumbent cable operators, and small cable operators, describe difficulties they have had gaining access to programming, which they consider "must-have," such as regional sports and news networks, as they have in previous years. These commenters state that without access to regional sports and news programming networks many of which are affiliated with

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[602] *Notice*. 18 FCC Rcd at 16045 ¶ 13

[603] *Id* at 16047 ¶ 18

[604] *Id* at 16046-47 ¶¶ 17-18.

[605] 47 U.S.C § 548

[606] *See Implementation of the Cable Television Consumer Protection and Competition Act of 1992, Petition for Rulemaking of Ameritech New Media, Inc Regarding Development of Competition and Diversity in Video Programming Distribution and Carriage*, 13 FCC Rcd 15822, 15856-7 ¶¶ 70-71 (1998) ("*Program Access Order*")

incumbent cable operators, it is difficult to compete.[607] They claim that incumbents' ability to foreclose programming is due, in part, to the terrestrial-delivery exemption in the existing program access rules, alleging that some cable companies intentionally "migrate" programming to terrestrial distribution in order to avoid their programming access obligations.[608] They contend that consolidation and the clustering of cable systems within certain regions have exacerbated this problem[609] and are concerned that an increasing amount of programming will be denied them on the basis of the terrestrial-delivery exemption.[610] As evidence, BSPA cites the CEO of a fiberoptic network who stated that his network could be used to deliver programming terrestrially.[611] Commenters cite examples of terrestrially-delivered regional news and sports networks that they are unable to provide their subscribers, including Comcast Sports Net, the New England News Channel ("NECN"), and overflow sports programming distributed by Cablevision-owned networks.[612] In addition, they observe that an increasing amount of regional sports programming has been moved from broadcast television to non-broadcast networks and, as a result of being denied this programming due to the terrestrial-delivery exemption, they cannot provide this "critical" programming to their subscribers.[613]

150. Cable operators respond that Congress explicitly exempted terrestrial delivered programming from the program access rules.[614] In this regard, NCTA notes that the Commission previously found that a cable operator may choose terrestrial over satellite distribution as a legitimate business practice.[615] It explains that, since regional sports and news networks are intended to serve a limited geographic area, programmers choose terrestrial delivery designed to serve a small area, rather than satellite delivery designed to serve the entire U.S. Moreover, Comcast and NCTA state that no commenter has provided evidence showing that any programming network has ever been migrated from satellite to terrestrial delivery for the purpose of "evading" the program access rules.[616] Rather, they

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607 RCN Comments at 7; RCN Reply Comments at 2-3, BSPA Comments at 17-18; ACA Comments at 3-4.

608 BSPA Comments at 17-18, DirecTV Comments at 9-10, RCN Comments at 8-9.

609 BSPA Comments at 18; RCN Comments at 10; Direct TV Comments at 10-11.

610 *Id* at 18.

611 *Id* (quoting Jerald L. Kent, CEO, Cequel III, a co-owner of Broadwave Communications Services).

612 RCN Comments at 7-9. *See also* BSPA Comments at 17; DirecTV Comments at Exhibit D.

613 BSPA Comments at 17-18

614 Comcast Reply Comments at 14; NCTA Reply Comments at 8-9. Under the Communications Act, the prohibition on exclusive contracts enacted as part of the program access provision in the 1992 Act was set to sunset on October 5, 2002, unless the Commission determined the rules were still necessary. On June 13, 2002, the Commission adopted a *Report and Order* extending the prohibition until October 5, 2007. In the *Report and Order*, the Commission decided that this prohibition continues to be necessary to preserve and protect competition and diversity in the distribution of video programming.[614] In the same proceeding, the Commission concluded that the language of section 628(c) expressly applies to satellite programming, and that terrestrially-delivered programming is not covered. *Program Access Order*, 13 FCC Rcd at 15856-57 ¶¶ 70-71.

615 NCTA Reply Comments at 10-11.

616 Comcast Reply Comments at 14-16, NCTA Reply Comments at 9.

note that the three terrestrially-delivered networks which RCN and DirecTV have claimed in proceedings before the Commission were evasions have been determined not to be so by the Commission.[617]

151 In addition, a number of MVPDs that compete with incumbent cable operators and small cable operators are concerned about exclusive carriage agreements between incumbent cable operators, especially the large vertically-integrated MSOs, and unaffiliated programmers.[618] They assert that incumbent cable operators seek exclusive contracts with unaffiliated programmers, often leveraging their own vertical relationships with programmers to maintain barriers to entry by denying "must-have" programming to competitors. For example, RICA states that a number of its member small cable systems serving rural areas have been unable to obtain access to programming owned by Disney, Fox and others, including ESPN, TV Land, MSNBC, and Fox Sports Midwest.[619] According to BSPA, Everest Connections' Kansas City system has been denied access to University of Missouri basketball games because Mizzou Sports Properties, the rights holder, has an exclusive agreement with the incumbent cable operator, a Time Warner affiliate.[620] It also mentions an August 2003 meeting between Comcast, Cox, Time Warner, Adelphia, and Charter and Los Angeles County representatives in which the cable MSOs sought to have local county government programming made exclusive to their systems[621]

152. In response, Comcast states that exclusive arrangements with unaffiliated programmers, such as Mizzou Sports Properties, are not covered by the program access rules.[622] Comcast and NCTA point out that cable operators face the same challenges in receiving access to programming carried exclusively by other MVPDs, such as DirecTV's carriage of the *NFL Sunday Ticket* which provides valuable football programming.[623] Further, Comcast observes that BSPs could invest in developing their own exclusive programming now that they serve hundreds of thousands of subscribers.[624]

153. In the *Notice*, we asked if program access issues have arisen with respect to new services, such as VOD.[625] BSPA recommends that the Commission adopt a "technology neutral view of content access" so that no consumer is denied access to digital content.[626] BSPA and RCN urge the

[617] Comcast Reply Comments at 14, NCTA Reply Comments at 9-10.

[618] BSPA Comments at 14-17; RICA Comments at 3; ACA Comments 3-4, RCN Comments at 11; DirecTV Comments at 17, Exhibit D (listing over 30 regional networks that are unavailable to non-cable operators, either due to terrestrial distribution or exclusive carriage agreements).

[619] RICA Comments at 4.

[620] BSPA Comments at 16 A complaint on this matter is pending, CSR-6094-P.

[621] BSPA Comments at 14-15.

[622] Comcast Reply Comments at 16-17 *See also* NCTA Reply Comments at 8.

[623] NCTA Comments at 13; Comcast Reply Comments at 13.

[624] Comcast Reply Comments at 16.

[625] *Notice*, 18 FCC Rcd at 16047 ¶ 18.

[626] BSPA Comments at 18-22, 31-33.

Commission to extend program access-types rules to all digitally distributed content stored at the cable headend[627] BSPA and RCN seek regulation of VOD hardware, software, and content as well as HDTV content to ensure access.[628] To support its position, BSPA states that iN DEMAND, a company owned by Comcast, Time Warner, Cox, which is a dominant provider of VOD programming, has denied non-member/owners' access to its service.[629] In its reply, iN DEMAND notes that initially it had limited deployments, but that it currently has a VOD agreement with Knology and is negotiating with other non-member/owner companies.[630]

154. ***Must Carry and Retransmission Consent.*** Under Sections 614 and 615 of the Communications Act, cable operators must set aside up to one third of their channel capacity for the carriage of commercial television stations and additional channels for noncommercial stations depending on the system's channel capacity.[631] Pursuant to the Satellite Home Viewer Improvement Act of 1999 ("SHVIA"), DBS operators may provide local-into-local broadcast television service.[632] Unlike cable operators that are required to carry local television stations in every market they serve, a DBS operator must carry all stations in any market where it chooses to carry one local television station ("carry-one, carry-all").[633] In both the cable and DBS contexts, commercial broadcasters may elect to be carried pursuant to must-carry status or retransmission consent[634] Where a station elects must-carry it is generally guaranteed carriage, but it is prohibited from receiving compensation for this carriage.[635] Under retransmission consent, the broadcaster and cable or DBS operator negotiate an agreement that may involve compensation in return for permission to retransmit the broadcast signal. The current rules apply to the carriage of analog television stations In the pending *DTV Must-Carry Proceeding,* the Commission is considering issues relating to the carriage of digital television signals and whether to require dual carriage of analog and digital signals during the DTV transition.[636]

155. Some cable commenters claim that the retransmission negotiation process for broadcast carriage is being abused. They assert that, in return for retransmission consent for the carriage of network O&Os, they must agree to carry network-affiliated cable programming networks not only in the

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[627] *Id* at 27-31; RCN Comments at 10-11.

[628] RCN Comments at 10-11.

[629] BSPA Comments at 28-29

[630] iN DEMAND Reply Comments at 1-2. *See also* Comcast Reply Comments at 19-20.

[631] 47 U.S.C §§ 534(b), 535(b) *See also* 47 C.F.R. § 76.56

[632] SHVIA was enacted as Title I of the Intellectual Property and Communications Reform Act of 1999 (relating to copyright licensing and carriage of broadcast signals by satellite carriers, codified in scattered sections of 17 and 47 U.S.C), Pub.L. No 106-113, 113 Stat. 1501, 1501A-526 to 1501A-545 (Nov. 29, 1999).

[633] 47 C.F. R. § 76.66.

[634] 47 C.F. R. § 76.64

[635] 47 C F.R. § 76.60.

[636] *See DTV Must Carry Order,* fn. 448 *supra*

markets where the O&Os are located, but on all their cable systems.[637] In this regard, Cox observes that, since cable operators must pay for carriage of these affiliated programming networks, these agreements result in increased cable rates for consumers.[638] The Broadcast Networks respond that the retransmission process is working well with very few bargaining impasses and that they bargain in good faith. They indicate that they may legally seek carriage of additional channels or cash in return for retransmission consent and dismiss the cable companies' comments as efforts to secure better terms..[639] The Broadcast Networks further state that they offer cable operators multiple options, including cash payment per subscriber, in exchange for retransmission consent.[640] Cox, however, contends that broadcasters exercise market power that harms the public interest by requiring carriage of less-desired programming.[641] While Cox initially indicated that it was never formally offered a cash payment option by any of the Broadcast Network commenters, it subsequently provided a clarification indicating that it received a cash payment option for KCAL, the Los Angeles CBS affiliate.[642]

156. NAB and NRTC argue that DBS operators should be required to carry local broadcast signals in all 210 DMAs.[643] NAB further suggests that DBS operators be required to carry broadcasters' HDTV signals and both their analog and digital signals during the digital transition.[644] DirecTV and SBCA state that there is no statutory basis for these requirements, the Commission has declined to require DBS operators to carry television broadcast stations' digital or HDTV signals, and such requirements would limit DBS operators' ability to use their spectrum capacity for diverse programming.[645] NAB counters that the satellite industry has historically claimed limited capacity, while continuing to increase the number of markets where local-into-local television service is

[637] Cox Comments at 16-18, ACA Comments at 5-7, Coalition Comments at 1-2, OPASTCO Comments at 3.

[638] Cox Comments at 17-19.

[639] Broadcast Networks Reply Comments at 3-6

[640] *Id* at 2

[641] Letter from To-Quyen Troung, Counsel to Cox Communications, to Marlene H. Dortch, Secretary, FCC (Oct. 14, 2003) at 2.

[642] Letter from To-Quyen Troung, Counsel to Cox Communications, to Marlene H. Dortch, Secretary, FCC (Nov. 24, 2003) at 1 (Cox refused to accept CBS' offer to pay $0.75 per subscriber per month for carriage of KCAL because it was concerned that the other seven retransmission consent stations it carried would make similar demands and Cox would have to raise its basic service rates by $5.25) *See also* Letter from John C. Quale, Counsel to the Broadcast Networks, to Marlene H. Dortch, Secretary, FCC (Dec. 23, 2003) (detailing options offered to Cox by the networks for retransmission consent); Letter from Susan L. Fox, Vice President, Government Relations, The Walt Disney Company (Dec 23, 2003) (regarding Disney's willingness to offer a cash payment option to Cox).

[643] NRTC Comments at 5-7 (this requirement should be met by January 1, 2006); NAB Reply Comments at 1; NRTC Reply Comments at 1-4.

[644] NAB Reply Comments 1-2, 11

[645] SBCA Comments at 13, DirecTV Comments at 9.

provided.[646] In this regard, NAB and NRTC note that DirecTV recently committed to offer local-into-local service in all television markets by 2008, and perhaps as early as 2006.[647]

157. With respect to the carriage of digital television signals, Paxson argues that cable and satellite companies' must-carry obligations should be expanded to include multicast offerings[648] Paxson states that it can only compete against cable and other MVPDs if cable must-carry obligations are expanded to include multiple streams of content (analog and digital) and HD signals.[649] NAB also argues that dual carriage of analog and digital signals is necessary for the digital transition.[650] Comcast responds that digital signal carriage issues should be addressed in the on-going *DTV Must-Carry Proceeding*.[651]

b. Sports Programming

158. Sports programming continues to be an important segment of programming for all MVPDs.[652] According to many commenters, local and regional programming holds high value for subscribers[653] Of the 84 regional cable channels identified this year, 27, or 33%, are sports channels.[654] In 1998, 29 of the 61 regional cable channels were regional sports networks.[655] The most widely distributed sports programming network, ESPN, which is owned by Disney, reaches almost 87 million television households through a variety of MVPD technologies. While ESPN dominates national sports programming, regional sports distribution is dominated by Fox, which owns or holds an ownership interest in 70% (19 of 27) of all regional sports networks.[656] These regional sports networks serve approximately 79 million subscribers.[657]

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[646] NAB Reply Comments at 3-9.

[647] NAB Reply Comments at 4-5; NRTC Reply Comments at 2-3. *See also* DirecTV Reply Comments at 3-4 (citing Letter from William M Wiltshire, Counsel for The News Corporation Limited, Garry M. Epstein and Richard E Wiley, Counsel for General Motors Corporation and Hughes Electronics Corporation, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 03-124, Sept 22, 2003).

[648] Paxson Comments at 4-6.

[649] *Id* at 5-8

[650] NAB Reply Comments at 11.

[651] Comcast Reply Comments at 17-19 (noting that the Commission has tentatively concluded that multicast must carry should not be required). *See also DTV Must-Carry Order*, fn. 448 *supra*.

[652] *See, e g*, Comcast Comments at 27, RCN Reply Comments at 3.

[653] Comcast Comments at 27-28.

[654] *See* Appendix C, Table C-3.

[655] *See 1998 Report*, 13 FCC Rcd at 24380-81, 24439-41 ¶ 171, Appendix D, Table D-3.

[656] *See* Appendix C, Table C-3.

[657] *. . plication of General Motors Corporation and Hughes Electronics Corporation, Transferor, and the News Corporation Limited, Transferee, for Authority to Transfer Control*, MB Docket No. 03-124 (May 2, 2003), at 26.

159 MVPDs that compete with incumbent cable operators, such as DBS operators and BSPs, assert that cable operators deny competitors access to vertically-integrated regional sports programming that is delivered terrestrially.[658] For example, RCN contends that it was initially denied access to Comcast's SportsNet in Philadelphia, and subsequently it obtained only a short-term agreement for carriage.[659] Comcast disputes this claim and states that Comcast SportsNet has been available to, and carried by, RCN since it was created, without interruption[660] Moreover, BSPA notes that Congress recognized the importance of sports programming and alleges that cable operator exploitation of the terrestrial-delivery exemption exacerbates the problem of making certain sports programming available only over certain distribution platforms.[661] Cable interests respond that these allegations amount to a request for government mandated access to programming that Congress deliberately chose to exempt from the program access rules.[662]

160. In addition, BSPA states that incumbent cable operators enter into exclusive programming arrangements that deprive its members of access to regional sports networks[663] For example, RCN alleges that Comcast has entered into an exclusive arrangement with New England Sports Network ("NESN") to provide its HDTV sports programming, which RCN considers critical programming for it subscribers.[664] Comcast disputes this charge, stating that it was simply the first MVPD to negotiate a carriage agreement for NESN's HDTV programming in return for support for launch of this coverage.[665] In response, RCN claims that it was rebuffed when it first approached NESN to negotiate a carriage agreement, an expected response given previous arrangements that prevented RCN from acquiring programming,[666] although it acknowledges that it may now be able to negotiate an agreement for this programming.[667]

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[658] RCN Comments at 7-10, BSPA Comments at 17-18.

[659] RCN Comments at 7-8. RCN states that it hopes to finalize a long-term contract for this programming soon *Id*

[660] Comcast Reply Comments at 15 (citing Comcast Corporation and AT&T Corp., Reply to Comments and Petitions to Deny Applications for Consent To Transfer Control, MB Docket No. 02-70, May 21, 2002, at 101-102, Letter from James L. Casserly, Counsel to Comcast, to Marlene H Dortch, Secretary, FCC, Sept. 10, 2002, at 1-2)

[661] BSPA Comments at 17-18. *See also* RCN Comments at 8-9.

[662] NCTA Reply Comment at 8; Comcast Reply Comment at 14-15.

[663] BSPA Comments at 14, 16 (citing Mizzou Sports Properties exclusive arrangement in Kansas City, *see* para. 151 *supra*)

[664] RCN Reply Comments at 2.

[665] *See* Letter from James L. Casserly, Counsel to Comcast, to Marlene H. Dortch, Secretary, FCC (Oct. 8, 2003), at 1-2

[666] *See* Letter from L. Elise Dieterich, Counsel to RCN, to Marlene H. Dortch, Secretary, FCC (Oct. 16, 2003).

[667] *Id* *See also* Letter from Ryan G. Wallach, Counsel to Comcast, to Marlene H. Dortch, Secretary, FCC (Nov. 18, 2003) at 2 (citing attached declaration of Peter Plaehn, Vice President of Marketing, NESN, clarifying that Comcast does not have any exclusive rights that would prevent NESN from entering into an agreement with RCN)

c. News Programming

161. Local news channels have been on cable since at least 1986, when Cablevision launched News 12 Long Island. This year, of the 84 regional programming networks identified, 37 or 44% are regional news networks.[668] In 1998, 25 of the 61 regional cable channels were regional news networks.[669] Unlike sports programming, regional and local news networks have a more diverse ownership. Some regional news networks are vertically integrated with cable MSOs, such as Time Warner's New York 1 News and Rhode Island News Channel, owned in part by Cox Communications.[670] Others are affiliated with local broadcasters or newspapers, including Allbritton's Newschannel 8 in the Washington, D.C., area, A.H. Belo Corporation's Texas Cable News serving Dallas, and Six News Now, owned by the Sarasota Herald-Tribune.

162 RCN and DirecTV comment that they have had difficulty obtaining access to some regional news programming.[671] For example, RCN states that Comcast refused to waive its exclusive rights to carry terrestrially-delivered New England News Channel ("NECN"), thereby denying RCN access to this important local programming.[672] Comcast counters that NECN was exempted from the prohibition on exclusive contracts by the Commission based on a finding that its regional programming served the public interest[673]

d. Other Programming

163. In the *Notice*, we sought information regarding public, educational and government ("PEG") channels and programming provided by DBS operators in compliance with the public interest programming obligations.[674] In addition, this year, we specifically requested comment on locally-originated programming, children's programming, local news, community affairs programming, and non-English language programming.[675]

164. ***PEG Programming.*** Local franchising authorities may request, as part of the franchising process, that operators devote a certain amount of channel capacity and equipment to PEG programming.[676] PEG channels are intended to provide community-specific information, such as

[668] *See* Appendix C, Table C-3.

[669] *See 1998 Report*, 13 FCC Rcd at 24383, 24439-41 ¶ 176, Appendix D Table D-3

[670] Radio and Television News Directors Association, at http://www.rtnda.or/resources/nonstopnews/directory.html (visited Oct 6, 2003).

[671] RCN Comments at 8; DirecTV Comments at 17, Exhibit D.

[672] RCN Comments at 8. *See also* BSPA Comments at 17.

[673] Comcast Reply Comments at 15-16 (citing *New England Cable News*, 9 FCC Rcd 3231 (1994))

[674] *Notice*, 18 FCC Rcd at 16046-7 ¶ 17.

[675] *Id* at 16046 ¶ 14.

[676] 47 U.S.C. § 531. Local franchise authorities are allowed to establish procedures under which the cable operator may utilize unused PEG channel capacity for other services. 47 U.S.C. § 531(d)(1).

bulletin boards for local activities for local activities, local civic meetings, and local governmental activities In addition to PEG channels, some cable operators also are providing local and regional sports, weather, and news programming. There are over 5,000 PEG channels carried nationwide,[677] with Comcast reporting that it carries more than 2,400 PEG channels across the country and spends $100 million in direct support for PEG channels.[678] Cable operators do not have ownership interests in PEG access programming, although some franchise agreements require that they provide services, production facilities, and equipment for the production of local programming. PEG programming is not, therefore, considered vertically integrated.

165. ***DBS Public Interest Programming.*** DBS operators are required to reserve four percent of their channel capacity for "noncommercial programming of an educational or informational nature."[679] DirecTV states that it currently carries 11 channels pursuant to this requirement as well as additional educational channels that it does not include as part of its compliance with the rules.[680] We previously reported that EchoStar carried 21 channels in compliance with this requirement and other educational channels.[681] DBS providers are charging some noncommercial programmers for carriage on their systems to the extent allowed by the Commission's rules.[682]

166. ***Locally-originated, Community-oriented, Children's and Non-English Programming.*** A number of commenters provide information regarding locally-produced, community-oriented, children's and non-English programming they offer consumers. This information is illustrative of the variety of programming offered to consumers.

167. In addition to the regional/local news and sports programming previously mentioned, cable operators provide a source of community-oriented programming through local origination channels that cover news, sports, weather, local politics, education, and cultural and ethnic activities since their earliest days.[683] A few examples are: Cox4, Baton Rouge, which highlights area schools;

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[677] Telephone conversation with Bunnie Riedel, Executive Director, Alliance for Community Media (Oct. 27, 2003)

[678] Comcast Comments at 24 *See also* Cox Comments at 7

[679] *See Implementation of Section 25 of the Cable Television and Consumer Protection Act of 1992, Direct Broadcast Satellite Public Interest Obligations*, 13 FCC Rcd 23254 (1998). On August 19, 2003, Word of God Fellowship, Inc. dba Daystar Television Network filed a Request for Section 403 Inquiry and for Declaratory Ruling regarding exclusive contracts for programming carried on DBS channels reserved pursuant to the DBS public interest obligations *See Request For Comment On Petition Regarding DBS Public Interest Obligations And Private Contractual Arrangements*, 18 FCC Rcd 18689 (2003)

[680] This programming includes C-SPAN, Trinity Broadcast Network (TBN), PBS You, Link TV, Eternal Word Television Network, Mari+Vaision, I Life, NASA-TV, RFD-TV, The Word, Daystar, and BYU-TV. DirecTV Comments at 16.

[681] *2002 Report*, 17 FCC Rcd at 26964 ¶ 151.

[682] Under the Commission's rules, a DBS provider may charge no more than 50% of the direct costs involved in making capacity available to carry a qualified noncommercial programmer counted in satisfaction of the set-aside rule *See* 47 C.F.R. § 25.701(c)(5).

[683] NCTA Comments at 65-67, Appendix C.

Insight's 24-hour educational access channel in Covington, Kentucky; Armstrong's Orrville, Ohio, system's coverage of local school events; and Comcast's CN8, which provides local news, discussions of public issues, and family entertainment in several states[684] Comcast states that it produces local public affairs programming such as "Local Edition" and "Newsmakers," five-minute programs shown every half hour on the channel carrying CNN Headline News.[685] In addition, Time Warner reports that one of its cable systems is developing an on-demand local channel.[686]

168 Numerous cable and satellite operators report carrying programming specifically aimed at children Among the programming networks with children's programming listed are: ABC Family Channel; Boomerang; Cartoon Network; Discovery Kids; Disney Channel (East & West); Hallmark Channel, Nickelodeon/Nick at Nite; Noggin/The "N"; PBS Kids; Toon Disney; and TV Land.[687]

169. Cable and DBS operators also offer a range of non-English and international programming. For example, DirecTV carries numerous Spanish and Chinese-language programming networks.[688] The Dish Network offers Arabic, South Asian, Polish, Greek Chinese, Russian and Korean-language packages in addition to several Spanish packages.[689] Comcast produces two specialty Spanish-language programming tiers in markets with large Spanish-speaking populations.[690] Cablevision has launched a 30-channel Hispanic digital tier (iO en Espanol) and Time Warner offers a tier of 15 Spanish-language networks (DTV en Espanol).[691] In New York City, Time Warner offers two local news channels, one of which is a Spanish-language service.[692] Cox offers a TeleLatina tier and international premium services, such as TV Asia and Washington Korean TV, to its digital customers.[693]

e. Programming Costs

170. The Commission's most recent report on cable industry prices ("*2002 Price Survey Report*") asked cable operators to describe factors that led to changes in their rates. Competitive and noncompetitive cable operators attributed 61.2% and 66.1%, respectively, of their rate increases to

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[684] *Id See also* Comcast Comments at 24 -25

[685] Comcast Comments at 38

[686] Time Warner Comments at 10.

[687] DirecTV Comments at 16; Cox Comments at 7-8, Comcast Comments at 24.

[688] DirecTV Comments at 16; Cox Comments at 8, n 8 *See generally* SkyReport, *Niche Programming,* 2 THE BRIDGE (Sept 2003) (describing non-English and other niche programming services).

[689] Dish Network, at http://www.dishnetwork.com/content/programming/international/index.shtml (visited Oct. 27, 2003).

[690] Comcast Comments at 23-24

[691] NCTA Comments at 52.

[692] Time Warner Comments at 10.

[693] Cox Comments at 8.

increases in programming costs.[694] GAO recently found that programming costs have risen on average by as much as 34% in the last three years. During the same time period, GAO states that sports programming costs have increased on average by 59%[695]

171 Cable operators state that increases in programming costs reflect their investments in higher quality programming.[696] In particular, a major source of increased programming costs is sports programming attributable to competition among sports networks and rising players' salaries that lead to increased television rights fees.[697] For example, Cox reports that its programming costs increased an average of 12% last year, but some sports networks are seeking up to 35% annual price increases.[698] Cox further claims that sports programming is responsible for the price of cable service increasing more than three times the rate of inflation.[699] As a result, Cox is refusing to pay the 20% increase ESPN is demanding when their current contract expires in March 2004.[700] Currently Cox asserts that it pays $2.61 per subscriber per month for carriage of ESPN on its expanded basic tier, compared to an average of $2.55 per subscriber per month for the seven top-rated programming networks combined carried on that tier. Moreover, Cox seeks the right to place ESPN and other high priced programming on optional tiers.[701] ESPN counters that cable's rising rates are caused more by the industry's digital upgrades than by higher programming costs.[702]

172 Moreover, several commenters state that they face difficulties obtaining access to necessary content at reasonable rates, noting that the largest cable operators pay less, and can negotiate more favorable terms, than other MVPDs for programming.[703] In this regard, Qwest estimates that it pays approximately 20% more for programming than the incumbent cable operators with which it competes.[704] ACA similarly states that small cable operators pay more for satellite-delivered

[694] Inflation, channel additions, and system upgrades, were also said to account for a large portion of rate increases *See 2002 Price Survey Report*, fn 10 *supra*, 18 FCC Rcd at 13296 ¶ 34, Table 8.

[695] *See 2003 GAO Report*, fn 7 *supra*, at 4, 21-22.

[696] NCTA Comments at 35-36; Cox Comments at 20-21.

[697] NCTA Comments at 35-37, Appendix A (Wildman Study, *Assessing Quality-Adjusted Changes in the Real Price of Basic Cable Service*); Cox Comments at 20-22 *See also* SkyReport, *Sports Programming*, THE BRIDGE (Aug 2003) at 3.

[698] Cox Comments at 20-21.

[699] Jim Lovel, *Cox Takes on ESPN, Fox*, ATLANTA BUSINESS CHRONICLE, at http://atlanta.bizjournals.com/atlanta/stories/2003/11/03/story1.html (visited Nov. 7, 2003).

[700] Under its current contract ESPN has increased its price 20% each of the last four years, the maximum allowable rate.

[701] John M. Higgins, *War of Words Between Cox, ESPN Escalates*, BROADCASTING & CABLE, Oct. 27, 2003, at 50.

[702] Frank Ahrens, *ESPN to Cox Back to You*, THE WASHINGTON POST, Oct. 23, 2003, at E1.

[703] Qwest Comments at 8-9; RICA Comments at 5; OPASTCO Comments at 2-3.

[704] Quest Comments at 9. Quest recognizes that programmers may charge new entrants and overbuilders higher prices on the basis of economies of scale, differences in delivery technologies and transmission costs, expected (continued...)

programming than the large MSO and are subject to costly terms and conditions for retransmission of local broadcast stations controlled by the networks and large affiliate groups.[705]

f. Packaging of Programming Services

173. In the *Notice*, we sought information regarding the packaging and marketing of programming and whether, and to what extent, distributors offer discrete programming choices, such as mini-tiers or a la carte services.[706] Generally, MVPDs continue to offer packages or tiers of service that include a large number of programming networks.[707] Bundling programming channels into packages allows greater penetration of individual channels which lowers the per subscriber price MVPDs pay to programmers and benefits new or niche channels through subscriber awareness that is necessary for the survival of such new programming, especially when it is not associated with a "brand name" entity.[708] Commenters assert that an a la carte requirement would result in reduced choices and higher prices for consumers due to increased transaction costs and the synergies associated with selling advertising and promoting services.[709] For these reasons, cable operators and other MVPDs have chosen to market their services primarily as programming packages and several programming networks (*e.g.*, Bravo and Disney) have migrated from a la carte offerings to traditional programming packages.[710]

174. GAO recently analyzed the costs and benefits of a la carte offerings. It found that, while an a la carte system might provide greater consumer choice, it would impose additional costs on subscribers and alter the current economic structure of the cable industry.[711] Initially, many consumers would have to obtain additional equipment to unscramble the networks they are authorized to receive. Cable operators would lose advertising revenues because they are based on the number of potential viewers (*i.e.*, the number of subscribers to the tier of service the network is carried on). If advertising revenues decline, then licensing fees may rise to compensate. These increased fees could be passed on to consumers and result in higher cable rates. Factors, including the pricing of a la carte service, consumers' purchasing patterns, and whether certain niche services would cease to exist with a la carte service, make it difficult to ascertain whether consumers would be better or worse off with such an approach. GAO comments that perhaps a separate tier for sports programming would be viable because of its loyal customer base, but also observes that sports programmers are reluctant to agree to such tiers because they seek wide availability of their programming.

(Continued from previous page)
viewership and advertising revenues, and the small size of the new entrant's subscribership under section 628(c)(2)(B). *See also* Comcast Reply Comments at 17 (citing 47 C.F.R. § 76.1002(b), which permits programmers to offer volume discounts to their largest customers)

[705] ACA Comments at 2.

[706] *Notice*, 18 FCC Rcd at 16046 ¶ 15.

[707] *1998 Report*, 13 FCC Rcd at 24387 ¶ 187. *See also 2003 GAO Report* at 30-31

[708] DirecTV Comments at 13-14, A&E Comments at 8-9. These commenters note that premium, pay-per-view and some sports programming has historically been offered separately on a per-channel or per-program basis. *Id.*

[709] A&E Comments at 8, 10. *See also* DirecTV Comments at 13.

[710] A&E Comments at 10-11.

[711] *See 2003 GAO Report* at 5-6, 32-33.

175 Some have suggested a la carte or mini-tier offerings could lower cable rates generally by allowing consumers to pay for sports and certain other expensive programming only if they choose to do so.[712] In this regard, ACA states that small cable operators would like to offer high-priced programming on an a la carte basis, but that network owners, such as Disney and Fox, currently require that their networks be carried on the expanded basic tier.[713] Recently, however, a number of larger cable operators announced plans to offer a few channels of sports programming on a separate tier. For example, Time Warner now offers a digital sports tier in New York and New Jersey that includes NBA TV, Tennis Channel, NBA TV, three Fox Sports Digital networks and Fuel for $3.95 a month. Similarly, Comcast has announced plans to begin a comparable sports tier in 2004.[714]

176. The most notable example of the development of a separate sports tier resulted from a dispute between Cablevision and the Yankee Entertainment and Sports Network ("YES"), a New York area sports network with rights to carry the New York Yankee baseball games and other sports programming. Initially, YES sought carriage on the Cablevision's expanded basic tier at a cost of $2 per subscriber per month.[715] Cablevision declined to accept these terms and did not carry YES during the 2002 baseball season. Prior to the start of the 2003 baseball season, Cablevision and YES agreed to a one year agreement which allowed Cablevision to offer YES on a new regional sports tier that also included MSG Network and Fox Sports Net New York at $4.95 per month. Cablevision also offers subscribers each channel separately for $1.95 a month.[716]

C. Technical Issues

177. In 1994, most technical efforts were focused on the development and use of digital compression and modulation technologies. On June 17, 1994, high-power DBS service, DirecTV, began its operation as an all-digital technology, capable of providing hundreds of channels of services, whereas cable was still providing an average of less than 47 channels via the analog standard.[717] Also at that time, telephone companies were contemplating the use of digital compression technologies to provide ADSL data transport services over their wired networks.[718] The cable industry accelerated the upgrade of its wired networks so that it could continue to experiment with, and deploy such advanced and competitive services as voice, data transport (later known as Internet access services), and advanced video services such as video-on-demand ("VOD"). Cable operators began to launch trials and commercial deployments

[712] *See* SkyReport, *Sports Programming*, THE BRIDG, at 3.

[713] ACA Comments at 4-5. According to GAO this is a common practice. *See 2003 GAO Report* at 33-34.

[714] CABLEFAX DAILY, Oct. 28, 2003, at 1.

[715] Peter Grant, *Cable Firms Cheer Yankee Network's Pact*, THE WALL STREET JOURNAL, Mar. 21, 2003, at B2. *See also* Ken Kerschbaumer, *Cablevision Finally Says YES*, BROADCASTING & CABLE, Mar. 17, 2003, at 2.

[716] *Id* Cablevision offers some alternative pricing for subscribers already receiving MSG and Fox Sports and some premium packages.

[717] Kagan World Media, *Channel Capacity Projections by Technology*, Marketing New Media, Sept. 16, 1996, at 1. Originally launched in 1991 as an analog service, medium-power DBS provider, Primestar, a DBS service owned and operated by a collective of cable operators, did not begin to use digital technology until July 31, 1994. Primestar service was acquired by DirecTV in 1998.

[718] *1994 Report*, 9 FCC Rcd at 7500-2 ¶ 112-115

of advanced service offerings as systems increased their capacity to handle such services. For example, at the end of 1994, Time Warner launched a commercial trial of VOD service in its Orlando, Florida, system, the first such service. Time Warner's early entry into the VOD market, however, was short-lived and the operation was closed by mid-1997.[719] By the time of our *1998 Report*, VOD deployment was more or less abandoned by cable operators, and instead cable operators were beginning to offer digital video services, facilities-based high-speed Internet access, and facilities-based cable telephony, with plans for widespread deployment of these services as networks continued to be upgraded. Today, advanced services are still evolving. With digital compression technology now in widespread use, as well as many of the services operating on cable platforms such as cable telephony and high-speed Internet access services, cable operators and other MVPDs are once again implementing VOD and other emerging services such as interactive television.

1. Cable Modems

178. Cable modems allow cable subscribers to access high-speed data services, over hybrid fiber-coaxial (HFC) cable plants.[720] At the time of our first *Report* in 1994, the Internet was still a nascent technology. Only five years later, the Internet was available via broadband, with approximately 300,000 cable modem subscribers achieving average data access speeds of between one and ten Mbps, with reported top speeds of 52 Mbps.[721] Cable modem deployment continues to increase, with manufacturers shipping nearly 1.9 million cable modems in North America during the second quarter of 2003.[722] By June 2003, there were approximately 13.4 million cable modem subscribers in the U.S.[723] At the time of our *1998 Report*, most subscribers to cable modem service leased the modem from an MSO. Today, approximately 70% of video subscribers taking high-speed Internet access services purchase their own modems.[724]

179 ***DOCSIS***. We continue to report on the progress of the CableLabs Certified Cable Modem Project (formerly known as Data Over Cable Service Interface Specification or DOCSIS). Although cable

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[719] Michael Grebb, *Time Warner Capitulates on VOD*, WIRED NEWS, May 1, 1997.

[720] As described above, cable modem service is primarily residential service, but may also include some small business service *See* fn. 135 *supra* *See also* para. 53 *supra*

[721] *The Web Contains 7 Million Sites*, Pandia Search, at http://www.pandia.com/searchworld/2000-39-oclc-size html (visited Nov. 17, 2003); *1998 Report*, 13 FCC Rcd at 24313 ¶ 52. These speeds represent download speeds. In the first several years of residential broadband Internet access use, return path (or upload) data transfer was often conducted over a telephone line at significantly lower data transfer speeds than the broadband downloads. *See 1998 Report*, 13 FCC Rcd at 24316 ¶ 55; *see also Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, 14 FCC Rcd at 2398 (1999).

[722] Kinetic Strategies, *Cable Modem Market Stats & Projections*, CABLE DATACOM NEWS, June 5, 2003, at http://cabledatacomnews com (visited Sept 23, 2003).

[723] Richard Bilotti, Benjamin Swinburne, Megan Lynch, *Broadband Update*, Morgan Stanley, July 7, 2003 at 16. *See also* NCTA Comments at 57.

[724] According to a Morgan Stanley report, an average of 68.4% of video subscribers to the top five MSOs purchased their modems as opposed to leasing them from the cable operator Time Warner is not included in this average, since data was not available Richard Bilotti, Benjamin Swinburne, Megan Lynch, *The Copernicus Theorem*, Morgan Stanley, July 2, 2003, at 37

modems were not available for residential use at the time of our *1994 Report*, a group of cable operators, joined together in December 1996 to issue a Request for Proposal ("RPF") that resulted in the development of the DOCSIS standard.[725] DOCSIS defines interface requirements for cable modems and cable modem termination systems ("CMTS") used for high-speed data distribution. Originally only one among many proposed standards, DOCSIS emerged as the leading option for the cable modem standard in late 1997.[726] In March 1998, the International Telecommunications Union approved DOCSIS.[727] In June 1998, CableLabs hosted a series of Interoperability and Certification conclaves to initiate the certification of the DOCSIS standard.[728] In general, DOCSIS certified modems are compatible with and inter-changeable across similarly certified DOCSIS equipped headends.

180. The first specification, DOCSIS 1.0, allows cable operators to deliver high-speed Internet services on a "best effort" basis simultaneously over the same plant as core video services.[729] To date, CableLabs has certified 234 DOCSIS 1.0 modems and 28 DOCSIS 1.0 CMTSs.[730] The next specification, DOCSIS 1 1, was designed to provide quality of service ("QoS") functionality allowing operators to offer such products as IP telephony and tiered services.[731] To date, CableLabs has certified 97 high-speed cable modems that comply with the DOCSIS 1.1 specification, and it has certified 25 DOCSIS 1.1 CMTSs.[732] In January 2002, CableLabs completed specifications for its latest standard, DOCSIS 2.0, which is designed to address issues concerning the upstream portion of the cable plant (the transmission from the consumer to the Internet), creating the standard for a network that has 30 Mbps capacity in both directions To date, CableLabs has certified 34 high-speed cable modems that comply with the DOCSIS 2.0 specification, and one DOCSIS 2.0 CMTS.[733] As of September 2003, 365 DOCSIS modems have received certification and

[725] *1998 Report*, 13 FCC Rcd at 24318-9 ¶ 57.

[726] *Id*

[727] *Id*

[728] *Id.*

[729] "Best effort" is a term for a quality of service class with no specified parameters and with no assurances that the traffic will be delivered across the network to the target device. Newton's Telecom Dictionary, 17th Edition, at 88.

[730] *See* CableLabs, *Certification and Qualification Testing*, at http://www.cablemodem.com/certification/ (visited Oct 24, 2003); *see also* CableLabs, *Four More DOCSIS 2 0 Modems Gain CableLabs Certified Status* (press release), July 25, 2003.

[731] IP telephony (also called "voice-over-IP" or "VoIP") is currently being deployed by some cable operators, and is expected to become an important service offering. By 2004, industry analysts expect cable operators to begin offering tiered services, which will include lower priced options with slower speeds Richard Bilotti, Benjamin Swinburne, Megan Lynch, *Broadband Update*, Morgan Stanley, July 7, 2003, at 3 QoS guarantees network bandwidth and availability for applications Any real-time media needs to be given prioritized traffic management treatment in order to assure the best user-perceived quality. NCTA, *Glossary of Cable & Telecommunications Terms*, Cable Developments 2003, at 293

[732] *See* CableLabs, *Certification and Qualification Testing*, at http://www.cablemodem.com/certification/ (visited Oct. 24, 2003); *see also* CableLabs, *Four More DOCSIS 2 0 Modems Gain CableLabs Certified Status* (press release), July 25, 2003

[733] *See* CableLabs, *Certification and Qualification Testing*, at http://www.cablemodem.com/certification/ (visited Oct 24, 2003).

54 CMTSs have gained qualified status under DOCSIS. All DOCSIS updates are compatible with earlier versions of DOCSIS products.[734]

181. Most operators continue to improve their high-speed Internet access service. Comcast, for example, has recently increased its downstream speeds for residential customers from 1.5 Mbps to 3 Mbps in 14 markets, with more to follow.[735] RCN increased its 3 Mbps "MegaModem" service to 5 Mbps in response to customer demands for more speed.[736] Several operators are adding voice services over the Internet access platform using Voice Over Internet Protocol (VoIP), such as Cablevision's Optimum Voice service.[737] Bright House, Cox, and Time Warner are conducting limited trials of this type of voice service and are expected to increase their deployments in the next year.[738]

182. ***PacketCable.*** PacketCable, another CableLabs project, is the standard developed for delivering advanced, real-time multimedia services over two-way cable plant.[739] The PacketCable effort began in 1997 when a team comprised of CableLabs members identified the need for a multimedia architecture to support the delivery of advanced services over DOCSIS 1.1. cable modem architecture.[740] PacketCable enables a wide range of services, including IP telephony, multimedia conferencing, interactive gaming, and general multimedia applications.[741] In late 2001, CableLabs established the PacketCable test program to begin qualifying vendor equipment over the course of four certification waves in 2002.[742] As of April 2003, a total of nine PacketCable devices were certified or qualified in the CableLabs certification test.[743] Currently, PacketCable's IP telephony is the service being focused on by the cable community.

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734 CableLabs, *Four More DOCSIS 2 0 Modems Gain CableLabs Certified Status* (press release), July 25, 2003.

735 Comcast Corp , *Comcast to Double Downstream Speeds for Comcast High-Speed Internet Customers* (press release), Oct 2, 2003.

736 RCN Corp , *RCN Raises the Bar By Increasing Cable Modem Download Speeds to Up to 5 Mbps* (press release), Oct 2, 2003.

737 CSC Holdings, Inc., *Phone Services-Optimum Voice*, at http //www optimumvoice.com/ (visited Oct. 28, 2003)

738 Eric Hellweg, *An Investor's Guide to VOIP*, CNN MONEY, Oct. 20, 2003, at http://money.cnn.com/2003/10/20/technology/techinvestor/hellweg/ (visited Oct. 28, 2003), Kinetic Strategies, Inc., *Volo Starts Cable VoIP Trial in Florida*, CABLEDATACOMNEWS COM, Oct. 1, 2003, at http //www cabledatacomnews.com/oct03/oct03-7.html (visited Oct. 28, 2003)

739 Cable Labs, *PacketCable Home*, at http://www.packetcable.com (visited Oct. 3, 2003).

740 Cable Labs, *Two CMS and Additional PaketCable Devices Get Certified/Qualified in Wave 25* (press release), Apr. 11, 2003.

741 Cable Labs, *PacketCable Home*, at http://www.packetcable.com (visited Oct. 3, 2003).

742 CableLabs, *PacketCable Qualification Process Ready for 2002* (press release), Nov. 6, 2002. CableLabs established the specifications in late 2000. *See* CableLabs, *Cablelabs Releases New Interim PacketCable Specifications* (press release), Nov. 28, 2000

743 Cable Labs, *Two CMS and Additional PaketCable Devices Get Certified/Qualified in Wave 25* (press release), Apr 11, 2003.

2. Navigation Devices

183 Section 629 of the Communications Act directed the Commission to adopt rules that would allow consumers to obtain "navigation devices," such as cable set-top boxes and other equipment, from commercial sources other than their cable providers.[744] In 1998, the Commission adopted rules that require MVPDs to unbundle security from other functions of the navigation device and, to make available point-of-deployment modules ("PODs"), to separately perform the conditional access function.[745] Thus, an MVPD subscriber would be able to obtain a set-top box without the security features ("host device") from a retailer, and the MVPD would provide a card-sized POD module for security functions (also called a "CableCARD")[746]

184. In the *Second Report and Order* in the navigation devices proceeding, the Commission adopted technical, labeling and encoding rules to permit TV sets to be built with "plug-and-play" functionality for one-way digital cable services, which include typical cable programming services and premium channels.[747] "Plug and play" means consumers can plug their cable directly into their digital TV set without the need for a set-top box At this time, consumers will still need a set-top box to receive two-way services, such as video on demand, pay-per-view, and cable operator-enhanced electronic programming guides. However, cable and consumer electronics industries continue to work on the development of an agreement for two-way "plug-and-play" receivers.[748] The Commission also initiated a *Second Further Notice of Proposed Rulemaking* to examine potential processes for approving new digital output and content protection technologies, including potential use of objective criteria.[749]

185. Prior to adoption of the *Second Report and Order*, through the OpenCable project, CableLabs developed hardware specifications for the POD module ("Cable-CARD"), as well as specifications for the software interface that a host device needs to accommodate the POD (known as the OpenCable Application Platform or "OCAP").[750] To begin development under the OpenCable project,

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[744] 47 U.S.C § 549

[745] 47 C.F.R. §§ 76.1202 and 76 1204. *See Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices* 13 FCC Rcd 14775 (1998) (*"First Navigation Report and Order"*)

[746] The POD, or CableCARD requirement is intended to permit portability among set-top boxes, which will increase the market base and facilitate volume production. *First Navigation Report and Order*, 13 FCC Rcd at 14793-4 ¶ 49. *See also* Cable Labs, *Open Cable-OCAP*, at http//www.opencable.com/ocap.html.

[747] *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, 18 FCC Rcd 20885 (2003) ("*Second Report and Order and FNPRM*").

[748] *Id*

[749] *Id.*

[750] *See* CableLabs, *Open Cable Project Primer*, at http://www.opencable.com primer/ (visited Oct. 3, 2003) CableLabs, *CableLabs Publishes OCAP Middleware Specifications* (press release), Jan. 3, 2002; *see also 2002 Report*, 17 FCC Rcd at 26970-1 ¶ 169. Specifications for OCAP 1.0, completed on December 21, 2001, provides for the downloading and execution of applications such as program guides and interactive content, to any OCAP-enabled devices by any cable system supporting OCAP In May 2002, CableLabs released OCAP 2 0, which is designed to support additional interactive applications in consumer devices Id.; CableLabs, *CableLabs Publishes OCAP 2 0 Middleware Specifications* (press release), May 6, 2002

manufacturers had to sign the POD-Host Licensing Agreement ("PHILA") in order to get access to the necessary technology to make PODs function in host devices.[751] Currently, there are 14 companies that signed the PHILA [752] The companies that have signed include manufacturers of digital televisions and set-top boxes, as well as other companies in the digital video industry.[753] Three suppliers of interoperable CableCARDS have been qualified by CableLabs.[754] Seven companies have submitted a total of 45 patents for assessment under the OCAP intellectual property rights agreement ("IPR").[755] In August 2003, following the completion of a wave of certification testing, CableLabs granted OpenCable certified status to Panasonic for four models of integrated DTV sets that connect directly to cable systems.[756] Now, both host devices and PODs are CableLabs certified.

186. Following the *Second Report and Order*, CableLabs released the DFAST Technology License Agreement for Unidirectional Digital Cable Products ("the DFAST License").[757] For manufacturers implementing "plug-and-play" products, the DFAST License replaces the PHILA. Initial devices must still be tested by a qualified test facility; however, subsequent models may be self-certified by the manufacturer.[758] The Consumer Electronics Association ("CEA") supports the Commission's *Second Report and Order and FNPRM*, and notes that "plug-and-play" will accelerate the sale of DTV-related consumer products..[759] In addition, CEA assets that timely implementation of a "Phase II" agreement for bi-directional services is necessary for the competitive supply of interactive digital cable-ready products that are fully interoperable with cable systems around the country.[760] The Consumer Electronics Retailers Coalition contends that beyond the Phase I issues covered in the *Second Report and Order* with regard to "plug and play," there must be a Phase II to provide for a truly competitive market for navigation devices in which all interactive features are made compatible or set-top boxes use specifications that are made

[751] CableLabs, *Broadcom Corporation Signs CableLabs PHILA* (press release), Mar 31, 2003.

[752] *Id.*

[753] *Id.*

[754] CableLabs, *CableLabs Awards CableCARD Qualification to NDS* (press release), Aug. 5, 2003.

[755] CableLabs, *CableLabs Joins Call for IPR Related to OCAP, Promotes Formation of Patent Pool* (press release), May 7, 2003

[756] *Panasonic Notches Digital Milestone Four Models of Integrated Digital Television Sets Achieve CableLabs OpenCable Certified Status* (press release), Aug. 14, 2003.

[757] CableLabs, *CableLabs Releases the DFAST Technology License Agreement for Plug and Play Devices* (press release), Oct. 20, 2003

[758] *Report and Order and Second Further Notice of Proposed Rulemaking*, FCC 03-255, Sept. 10, 2003, at 38

[759] CEA Comments at 9-10; CEA Reply Comments at 2.

[760] CEA Reply Comments at 2.

public.[761] The Consumer Electronic Retailers Coalition also notes that despite the development of some retail products, no "PHILA" device is yet available at retail.[762]

3. Emerging Services

187. *Interactive Television ("ITV").* We continue to monitor development of ITV technologies and services. In broad terms, ITV services are services that support subscriber-initiated choices or actions that are related to one or more video programming streams.[763] The Commission has noted that ITV was rapidly developing, thus making it difficult to define with specificity the precise universe of services that might be encompassed within the term. For purposes of discussion, the Commission instead attempted to identify the major technical resources or "building blocks" necessary for the provision of what it understood to be likely ITV services.[764] The identified components were: (1) a video transmission capacity associated with interactive content (*e.g.*, the digital video stream); (2) a two-way connection (*e.g.*, via the Internet); and (3) specialized customer premises equipment (*e.g.*, the interactive television set-top box).[765] For example, an interactive television service might be a "t-commerce" service, permitting consumers to electronically purchase merchandise related to the displayed video.[766] Although not requiring a return path, service offerings such as electronic program guides ("EPGs"), might also fit within the category.[767] A wide variety of services from data enhancements to interactive gaming may also be described as ITV services [768]

188 At the time of our *1994 Report*, ITV services as described above were not in use. By the time of our *1998 Report*, cable, DBS and other MVPDs were offering such ITV services as advanced electronic program guides, but t-commerce, and many of the other anticipated interactive services remained under development. Today, cable MSOs and DBS operators continue to develop a variety of ITV services in order to increase subscribership, develop new streams of revenue, and reduce churn. The assortment of interactive and enhanced interactive television products currently being developed makes following ITV

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[761] CERC Comments at 3-4.

[762] *Id* at 4.

[763] *See Nondiscrimination in the Distribution of Interactive Television Services Over Cable*, 16 FCC Rcd 1321 (2001) *("ITV NOI")*. The Commission sought comment on whether rules are necessary to prevent anticompetitive behavior and to promote diversity and capital investments in the ITV market.

[764] *Id* at 1323-28 ¶¶ 6-20.

[765] *Id* at 1324-5 ¶¶ 10-13. *See also AOL Time Warner Order*, fn. 94 *supra*, 16 FCC Rcd at 6637-9 ¶¶ 218-226

[766] *ITV NOI*, 16 FCC Rcd at 1323 ¶ 6.

[767] An EPG is an on-screen directory of programming. An interactive EPG (also known as an "IPG") allows users to sort and search programming, gives program descriptions, provides reminders of upcoming programming, and takes users to programming they select.

[768] Enhanced television services generally allow the viewer to obtain more information on certain programming, purchase products, permit the manipulation of the video image, or provide input on questions posed by the program distributor. With this type of technology, the subscriber accesses a graphic interface, overlay, or a screen that wraps around the displayed video signal(s), providing supplementary information related to the video display or a t-commerce opportunity

trends challenging[769] One industry observer notes that while many have been focused on the growth of enhanced interactive television (t-commerce and play-along interactivity), video subscribers have been "interacting" with their televisions daily through such ITV services as program guides and such emerging services as VOD and PVRs, described later in this section.[770] Other industry observers note that Websites offering interactivity synchronized to broadcast content remains the leading approach to enhanced ITV services.[771] One study found that more than 30 networks, including all major broadcast and most major cable networks, now offer some form of enhanced programming.[772]

189. Interactive television standards remain under development.[773] Last year we reported that CableLabs has recommended that cable operators include the European Digital Video Broadcast-Multimedia Home Platform ("DVB-MHP") application program interface in the OCAP specification in order to support ITV software applications in the United States[774] In July 2002, CableLabs hosted an interoperability event demonstrating support and incipient adoption of the OCAP middleware specification including the MHP standard.[775] In February 2003, the ITV Production Standards Initiative, led by GoldPocket, released version 1.1 of its "XML" specification for writing interactive television programs.[776]

190. On October 2, 2003, the Advanced Television Systems Committee ("ATSC") announced that it successfully harmonized its DTV Application Software Environment ("DASE") specification with CableLabs' OCAP specification creating the Advanced Common Application Platform ("ACAP") ACAP is currently a candidate standard awaiting implementation and technical feedback. This new standard will provide content creators, broadcasters, cable operators and consumer electronics manufacturers with the technical details required to develop interoperable services and products across all platforms[777]

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[769] *Study Reveals Growth for iTV Advertising*, IMEDIA, Sept 11, 2003.

[770] Ed Forman, *ITV Its Already A Part of Life in the US, and Only Cable Can Make the Most of It*, CABLE WORLD, Sept. 29, 2003

[771] *Study Reveals Growth for iTV Advertising*, IMEDIA, Sept 11, 2003

[772] *Id*

[773] Tim Halle, *Standards for Interactive Television. A Brief State of the Union*, ETV Cookbook, Mar. 27, 2003, at http.//etvcookbook org/reference/standards.html

[774] *See 2002 Report*, 17 FCC Rcd at 26972 ¶ 171

[775] CableLabs, *CableLabs Demonstrates Interoperability of ITV Applications* (press release), Aug 1, 2002.

[776] ITV Standards, *ITVProduction Standards Initiative Publishes Version 1.1 of Open XML Specification for Interactive Television* (press release), Feb 10, 2003. Improvements to the specification include the delineation of timing as its own element instead of as an attribute of each of the content types. Other improvements include the addition of genre, sequence, and status as new attributes to extend the richness of the content types; changes to data types to increase flexibility; and clearer definition of hierarchy and grouping. *Id. See also* ITV Standards, at http://www.itvstandards.org/iTVPublic/overview.aspx

[777] ATSC, *ATSC Published New Interactive "ACAP" Candidate Standard* (press release), Oct. 2, 2003.

191. ***Video-on-Demand ("VOD")***. VOD permits subscribers to instantly access video programming content on a program by program basis VOD subscribers are able to pause, fast-forward, or rewind programming in the same manner as permitted by a traditional video recorder. VOD is an evolved form of pay-per-view where subscribers do not have to wait to view desired programming. VOD requires the cable operator to install high-capacity video servers in its head-end (central office), and requires a digital set top box in the subscriber's home.[778] At the time of our *1994 Report*, VOD was limited to a single trial of VOD service by Time Warner. This deployment was unsuccessful and service ended three years later. One industry observer estimates that over 50 million digital cable and DBS subscribers interact with their televisions daily through the use of VOD and PVRs, at an average of 100 interactions per subscriber household per day.[779] According to one analyst, there were about 6.5 million VOD-enabled digital households at year-end 2002 and, by year-end 2003, there will be as many as 12.8 million.[780] In addition, the same analyst notes that, as of year-end 2002, there were 700,000 subscription-VOD households, and that, by year-end 2003, there will be three million.

192. *Personal Video Recorders ("PVRs")*. A PVR is a device connected to a television set, either embedded in a set-top box or as a stand-alone device, which uses a hard disk drive, software, and other technology to digitally process and record programming. PVR technology allows a consumer to pause, replay, rewind, and fast-forward television programs as well as skip past commercials. PVRs cannot play prerecorded videocassettes or DVDs, but can record pay-per-view signals or other content from digital platforms.[781] As many as 700,000 DBS homes were PVR enabled as of year-end 2002, and it is estimated that by year-end 2003, there will be 1.6 million DBS homes and almost one million cable homes that are PVR enabled.[782] As many as 500,000 "stand-alone" PVR have been deployed as of year-end 2002, and as many as 1.1 million will be deployed as of year-end 2003.[783]

IV. FOREIGN MARKETS

193 In the *Notice*, the Commission invited comment on developments in countries outside of the United States that might help to inform our understanding of video competition in the U.S. market.[784] Although none of the commenting parties responded to this invitation, we continue to believe that insights may be derived from such developments.

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[778] *See* paras. 44-45, 76 *supra* for discussions of VOD deployments.

[779] Ed Forman, *ITV Its Already A Part of Life in the US, and Only Cable Can make the Most of It*, CABLE WORLD, Sept. 29, 2003

[780] Richard Bilotti, Benjamin Swinburne, Megan Lynch, and Jeremy Falk, *PVR and VOD Video Real Estate-Buy vs Lease*, Morgan Stanley, Aug. 10, 2003, at 3 and 6

[781] *See* para 60, 76, 111 *supra* for additional discussions of PVRs.

[782] Richard Bilotti, Benjamin Swinburne, Megan Lynch, and Jeremy Falk, *PVR and VOD. Video Real Estate-Buy vs Lease*, Morgan Stanley, Aug. 10, 2003, at 6

[783] *Id* at 9. "Standalone" PVRs are purchased directly by the consumer, and subscriptions are managed by independent companies such as TiVo or ReplayTV. *Id.*

[784] *Notice*, 18 FCC Rcd at 16056 ¶ 48.

194 For example, the process whereby the television broadcasting system transitions from analog to digital transmissions is an important competitive issue both domestically and in Europe and has recently been successfully accomplished in the Berlin-Brandenburg television market in Germany. On August 4, 2003, analog transmission of terrestrial broadcast television service ceased in that market and was replaced with digital transmissions. It would appear that there may be potential lessons to be learned from this experience, although there are significant differences from the technical, economic, and regulatory situation in the United States as well

195. On the transition date, terrestrial broadcasters in Berlin switched off their analog transmissions and commenced broadcasting solely in a digital form. Each of the stations involved, which had been broadcasting a single programming service, started transmitting a "bouquet" or multiplex of digital services. Both before and after the transition, all of the services involved were in standard definition format. Unlike the situation in the United States, no transmission or reception of high definition content was involved. After the transition, all off-air viewers required either a new integrated digital television receiver or a digital set-top box in order to receive service. Of the 1.8 million television households in the market, some 160,000 receive terrestrial off-air reception only, with the rest receiving cable or satellite service. Ninety thousand homes were estimated to receive off-air reception on a second or third receiver. In terms of viewers' perceptions, it appears that neither satellite nor cable television subscribers were significantly affected by the change because of the signals in question being reconverted to analog format prior to consumer reception.

196. Among the reasons attributed for the success of the conversion were the following: (1) a relatively small percentage of viewers obtaining service through direct off-air reception; (2) significant improvements in the quality and amount of service available to these viewers after the transition, (3) a robust digital transmission system facilitating indoor reception; (4) the availability of relatively low cost analog to digital set-top box converters; (5) set-top box subsidy mechanisms for disadvantaged portions of the population; (6) careful coordination between all of the commercial and governmental entities involved; and (7) an aggressive communications program to prepare and keep the public informed of the changes taking place. A portion of the population also appears to have welcomed the change as providing an alternative to becoming dependent solely on cable reception.[785]

V. ADMINISTRATIVE MATTERS

197. This *2003 Report* is issued pursuant to authority contained in sections 4(i), 4(j), 403, and 628(g) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 154(j), 403, and 548(g).

198. It is ORDERED that the Office of Legislative Affairs shall send copies of this *2003 Report* to the appropriate committees and subcommittees of the United States House of Representatives and the United States Senate.

[785] *See Berlin Goes Digital; The Switchover of Terrestrial Television From Analogue to Digital Transmission in Berlin-Brandenburg* Project Report of the Medienanstalt-Berlin-Brandenburg, at http://www.MABB.de.

199. It is FURTHER ORDERED that the proceeding in MB Docket No. 03-172 IS TERMINATED

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch

Marlene H Dortch
Secretary